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INSTRUCTIONAL CONVERSATIONS AND THEIR CLASSROOM APPLICATION

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OVERVIEW

Generations of educators have advocated a type of teaching that does more than impart knowledge and teach skills. Knowledge and skills are undoubtedly important, but true education requires far more. It requires helping students use their knowledge and skills to understand, appreciate, and grapple with important ideas as they develop a depth of understanding for a wide range of issues and questions. Yet teaching aimed at these important goals is largely absent from U.S. classrooms.

"Instructional conversations" (ICs) might be one way to achieve the ambitious but elusive goals long held by many thoughtful educators. ICs are discussion-based lessons geared toward creating opportunities for students' conceptual and linguistic development. They focus on an idea or a students. The teacher encourages expression of students' own ideas, builds upon information students provide and experiences they have had, and guides students to increasingly sophisticated levels of understanding. In contrast to more directive forms of instruction, which assume that what is to be learned by the students is already in the head of the teachers, ICs assume that students themselves play an important role in constructing new knowledge and in acquiring new understandings about the world.

Conversations that instruct and stimulate thinking might be particularly important for language minority students, many of whom receive insufficient opportunities for conceptual and linguistic development at school. By providing students with opportunities to engage in interactions that promote analysis, reflection, and critical thinking, instructional conversations suggest a way to help redress the imbalance of a curriculum that is heavily weighted toward skills and knowledge acquisition.

Since the time of Socrates, educators and philosophers have argued for a kind of teaching that does more than impart knowledge and teach skills. Knowledge and skills are important enough, the argument goes, but true education--real teaching--involves far more. It involves, fundamentally, helping students understand, appreciate, and grapple with important ideas while they develop a depth of understanding for a wide range of issues and questions.

Yet teaching aimed at these important goals is presently most notable for its absence from U.S. classrooms. Goodlad (1984), for example, reports:

A great deal of what goes on in the classroom is like painting-by numbers--filling in the colors called for by numbers on the page. . . . [Teachers] ask specific questions calling essentially for students to fill in the blanks: 'What is the capital city of Canada?' 'What are the principal exports of Japan?' Students rarely turn things around by asking the questions. Nor do teachers often give students a chance to romp

with an open-ended question such as "What are your views on the quality of television?" (p. 108)

If this portrait is true in mainstream American classrooms, it is even more true in classrooms with low-income minority children. There are at least 2.2 million limited-English-proficient (LEP) students in our schools (U.S. Dept. of Education, 1991). Recent research indicates that these students are very likely to experience inadequate cognitive and language learning environments in school. According to a U.S. Department of Education-sponsored national study, whether they are in native-language or English-only programs, limited-English-proficient children

are limited in their opportunities to produce language and in their opportunities to produce more complex language. Direct observations reveal that teachers do most of the talking in classrooms, making about twice as many utterances as do students....Of major concern is that in over half of the interactions that teachers have with students, students do not produce any language....Of equal concern is that when students do respond, typically they provide only simple information recall statements. This pattern of teacher/ student interaction not only limits a student's opportunity to create and manipulate language freely, but also limits the student's ability to engage in more complex learning. (Ramirez, Yuen, & Ramey, 1991, p.8)

Because of the perception that these students fundamentally require drill, review, and redundancy in order to progress academically (Brophy & Good, 1986), their learning opportunities are likely to be excessively weighted toward low-level skills and fact-oriented instruction (see, e.g., Barrera, 1983; Goldenberg, 1984; Knapp & Shields, 1990). As important as skills and knowledge undoubtedly are, no less important are more intellectually demanding learning opportunities that promote, as philosopher Mortimer Adler has written, the "enlarged understanding of ideas and values" (1982, p. 23).

A particular kind of lesson, which we call "instructional conversation" (Tharp & Gallimore, 1988, 1989, 1991), might help us redress the imbalance Goodlad and others have noted. Instructional conversations, or ICs, are discussion-based lessons geared toward creating richly textured opportunities for students' conceptual and linguistic development. They suggest a way for educators to reach for the ambitious goals held by thoughtful teachers since the time of Socrates: "to bring [students'] thoughts to birth, to stimulate them to think and to criticise themselves, not [simply] to instruct them" (Rouse, 1956, p. ix).

WHAT IS AN INSTRUCTIONAL CONVERSATION?

In one sense, the idea of instructional conversations is not new. Since Socrates, generations of educators from differing perspectives have talked about and encouraged teachers to engage students in interactions to promote analysis, reflection, and critical thinking. In the 1920s, for example, the Progressive educator Vivian Thayer (1928) wrote, "The give and take of class discussion helps . . . test conclusions . . . and generates ideas that would otherwise remain unborn." Class discussions are invaluable, Thayer argued, for "opening up new territories for exploration [and] revealing the need of more intensive cultivation of ground already broken" (p. 320).

Contemporary researchers have also advocated more frequent use of the "discussion method." In a recent book, Wilen (1990) and colleagues examine various types of classroom discussions and their effects on student learning. Wilen argues that class discussion ("an educative, reflective, and structured group conversation with students," p.3) promotes critical thinking, engaging in productive social interaction, and assuming responsibility for one's own learning.

From a somewhat different orientation--but arriving at very similar conclusions--sociolinguistic scholars have also called for the incorporation of "real discussion" (Cazden, 1988, p. 54) into the language of the classroom. Noting the inherent limitations of the recitation format--in which, typically, a teacher initiates an interaction by asking a question, the student responds, and the teacher evaluates the response (Mehan, 1979, 1991)-- scholars of classroom language have advocated a "shift from recitation to something closer to a 'real discussion,' 'in other words, classroom 'talk in which ideas are explored rather than answers to teachers' test questions provided and evaluated" (Cazden, 1988, p.54). Such a shift, Cazden argues, would make Classroom talk . . . more like informal conversation" (1988, p. 55).

Thus, the kinds of classroom interactions ICs promote have a long and active history within educational thought and practice. But although commentators and educators have been talking about this type of teaching for millenia, it seems to be talked about more than done. Instructional conversations, or good classroom discussions, are notable not only for their incandescent qualities, but also for their rarity (see, e.g., Cazden, 1988; Gall & Gall, 1990; Goodlad, 1984). In a later section, I will return to the question of why this might be so. For the moment, suffice to say that one of the assumptions underlying the work reported here is that the development of an explicit instructional conversation model will help guide teachers in implementing this type of instruction, thereby increasing the likelihood that students will experience these sorts of learning opportunities.

Instructional conversations, as Tharp & Gallimore (1988) have noted, involve something of a paradox. On the one hand, they are *instructional* in intent--they are designed to promote learning. On the other hand, they are *conversational* in quality--they appear to be natural and spontaneous language interactions, free from the didactic characteristics nominally associated with formal teaching.

On the surface, a good instructional conversation might appear as "simply" an excellent discussion conducted by a teacher and a group of students. Most people have a reasonably intuitive sense of what such a discussion might be like. It is, first, interesting and engaging. It is about an idea or a concept that has meaning and relevance for students. It has a focus that, while it might shift as the discussion evolves, remains discernible throughout. There is a high level of participation, without undue domination by any one individual, particularly the teacher. Students engage in extended discussions--conversations--with the teacher and among themselves.

Teachers and students are responsive to what others say, so that each statement or contribution builds upon, challenges, or extends a previous one. Topics are picked up, developed, elaborated. Both teacher and students present provocative ideas or experiences, to which others respond. Strategically, the teacher (or discussion leader) questions, prods, challenges, coaxes--or keeps quiet. He or she clarifies and instructs when necessary, but does so efficiently, without wasting time or words. The teacher assures that the discussion proceeds at an appropriate pace-- neither too fast to prohibit the development of ideas, nor too slowly to maintain interest and momentum. The teacher knows when to bear down to draw out a student's ideas and when to ease up, allowing thought and reflection to take over. Perhaps most important, the teacher manages to keep everyone engaged in a substantive and extended conversation, weaving individual participants' comments into a larger tapestry of meaning.

Interestingly, instructional conversations are in some ways similar to verbal interactions that take place outside school between children and literate adults (e.g., Rogoff, 1990). These interactions appear to be very important for children's learning and cognitive development in general. For example, Rogoff notes that adults in many homes tailor their responses to children, "focusing their [the children's] attention, and expanding and improving the children's contributions." Although not designed to teach in a formal sense, "the tailored responses of middle-class adults communicating with young children," Rogoff concludes, "appear to support children's advancing linguistic and communicative skills" (1990, p.157).

But moving beyond such general descriptions, what characterizes good classroom instructional conversations? What are their constituent elements? What must teachers know and do in order to implement, successfully and reliably, these types of learning interactions with their students? Working in a low-income school district with a large language minority population in Southern California, and building upon earlier work in Hawaii (e.g., Au, 1979; Tharp & Gallimore, 1988), a collaborative team comprising teachers and researchers has attempted to address these questions over the past two years (see Goldenberg & Gallimore, 1991; Saunders, Goldenberg, & Hamann, in press). What has gradually emerged is a more precise model, or description, of instructional conversations.¹

INSTRUCTIONAL CONVERSATION AND DIRECT INSTRUCTION

As an anchoring strategy, it is useful to begin by contrasting instructional conversations with direct instruction, the latter being a far more familiar instructional approach in U.S. classrooms. In fact, such a

contrast was an important starting point for our group's work in defining instructional conversation. In comparing the two approaches, we drew heavily on published articles that defined direct, or explicit, teaching (e.g., Gersten & Gamine, 1986; Rosenshine, 1986), while also drawing upon teachers' own knowledge and experience. To begin identifying features of the IC, we used articles that presented relevant models of teaching (e.g., Au, 1979; Haggard, 1988; Tharp & Gallimore, 1989), but again, we also took advantage of teachers' own knowledge and intuitions about what constitutes this type of instruction.

Table 1 shows the comparisons our group made early in the 1989-90 school year. This was an important step in our work, because it laid the groundwork for a more fully elaborated vision of instructional conversations.

TABLE 1. DIRECT INSTRUCTION/INSTRUCTIONAL CONVERSATION COMPARISON

Direct Instruction	Instructional Conversation
teacher models	teacher facilitates
exact, specific answers	draw from prior or background knowledge
skill-directed	
easier to evaluate	many different ideas encouraged
step-by-step systematic instruction	build on information provided by students
teacher-centered	more student involvement
guided and independent practice following instruction	establish common foundation of understanding
no extension discussion	extensive discussion
goal is mastery after each step	fewer black and white responses
check for understanding	guided understanding

Although Table 1 in no way represents definitive or comprehensive descriptions of direct instruction and instructional conversation, it nonetheless suggests two important points about the comparison of these two teaching approaches.

First, *the two approaches proceed from substantially different assumptions about teaching and learning.* Direct instruction assumes that what is to be learned by the student is already in the head of the teacher. That is, teachers possess the knowledge or the skill they are attempting to impart, and teaching essentially consists of having students acquire this knowledge or skill through the teachers' skillful use of, for example, modelling, step-by-step instructions, practice opportunities, and checking for understanding.

In contrast, instructional conversations assume that students themselves must play an important role in constructing new knowledge and in acquiring new understandings about the world. The teacher thus plays the role of facilitator rather than of "transmitter." Accordingly, rather than provide step-by-step instruction designed to produce right answers or correct performance, the teacher in an IC encourages expression of students' own ideas, builds upon information students provide, and generally guides students to increasingly sophisticated levels of comprehension.

Second, *the two teaching modes suggest different roles for the teacher.* As its label implies, direct instruction is more direct. The teacher identifies one or more learning goals for students, then systematically designs and employs lessons to reach them. This does not mean that teachers merely "talk at" students or go through a rigid series of instructional steps, although direct instruction is sometimes caricatured in this way. But it does mean that teachers explicitly teach: They plan, organize, and deliver instruction.

In contrast, the teacher plays a less directive--but no less deliberate (Resnick, 1984) role in instructional

conversations. The teacher still plans and organizes, but the emphasis is less on delivery of instruction and more on facilitating and guiding student understanding in the course of extended verbal interactions. Sometimes, in fact, these extended verbal interactions will lead in a direction the teacher had not previously anticipated, which does not normally happen with direct teaching.

THE INSTRUCTIONAL CONVERSATION MODEL

Table 2 shows the list of IC elements, along with brief descriptions, that eventually evolved from the features first identified in Table 1. The Appendix contains the same list, but with more extensive definitions and a rating scale developed to judge the extent to which each element is present in a given lesson.

The elements in Table 2 are divided into two groups, instructional (# 1-5) and conversational (# 6-10), reflecting the two major dimensions of the IC. Although conversational in tone and character, teaching through conversation requires a deliberate and self-controlled agenda in the mind of the teacher. This is reflected in the first five elements. But while having specific curricular, cognitive, and conceptual goals, the teacher also tries to maintain a high degree of responsiveness and dynamic interaction with students, as the second five elements suggest.

Good instructional conversations might appear to be spontaneous, but in fact they are not. They are pointed toward a learning objective or a goal by the teacher, who must be thoroughly acquainted with the text and the ideas under discussion and with the many possibilities they offer for intellectual exploration, concept development, and the construction of meaning with students. Moreover, our experiences over the past two years suggest that teachers must carefully plan instructional conversations. They must decide on an appropriate thematic focus (element #1) to guide the discussion, at least initially. They must be aware of background knowledge

(#2) required for story comprehension and be prepared either provide it or help students recall and activate it. Teachers must also be ever mindful of potential opportunities students offer for extending the discussion and exploring new aspects of an idea (#7). By their very nature, these opportunities occur unexpectedly and are therefore difficult to anticipate or plan for explicitly. But as Pasteur observed, "Chance favors the prepared mind."

TABLE 2: ELEMENTS OF THE INSTRUCTIONAL CONVERSATION

INSTRUCTIONAL ELEMENTS

1. **Thematic focus.** The teacher selects a theme or idea to serve as a starting point to focus the discussion and has a general plan for how the theme will unfold, including how to "chunk" the text to permit optimal exploration of the theme.
2. **Activation and use of background and relevant schemata.** The teacher either "hooks into" or provides students with pertinent background knowledge and relevant schemata necessary for understanding a text. Background knowledge and schemata are then woven into the discussion that follows.
3. **Direct teaching.** When necessary, the teacher provides direct teaching of a skill or concept.
4. **Promotion of more complex language and expression.** The teacher elicits more extended student contributions by using a variety of elicitation techniques, for example, invitations to expand ("Tell me more about ____ "), questions ("What do you mean by ____ ?"), restatements ("In other words, ____ "), and pauses.

5. Promotion of bases for statements or positions. The teacher promotes students' use of text, pictures, and reasoning to support an argument or position. Without overwhelming students, the teacher probes for the bases of students' statements: "How do you know?" "What makes you think that?". "Show us where it says____."

CONVERSATIONAL ELEMENTS

6. Few "known-answer" questions. Much of the discussion centers on questions and answers for which there might be more than one correct answer.

7. Responsiveness to student contributions. While having an initial plan and maintaining the focus and coherence of the discussion, the teacher is also responsive to students' statements and the opportunities they provide.

8. Connected discourse. The discussion is characterized by multiple, interactive, connected turns; succeeding utterances build upon and extend previous ones.

9. A challenging, but non-threatening', atmosphere. The teacher creates a "zone of proximal development" (for definition, see p. 8), where a challenging atmosphere is balanced by a positive affective climate. The teacher is more collaborator than evaluator and creates an atmosphere that challenges students and allows them to negotiate and construct the meaning of the text.

10. General participation, including self-selected turns. The teacher encourages general participation among students. The teacher does not hold exclusive right to determine who talks, and students are encouraged to volunteer or otherwise influence the selection of speaking turns.

In developing the ICmodel shown in Table 2, we have drawn upon the classroom experiences of practicing teachers. The model evolved as teachers attempted to implement ICs in their classrooms, then reviewed and analyzed videotapes of the lessons. We have also drawn upon several currents in educational theory and research, in addition to the work cited above: for example, schema theory (Glaser, 1984; Hacker, 1980) and research on reading comprehension instruction (Dole, Duffy, Roehler, & Pearson, 1991). The writings of L.S. Vygotsky (1962, 1978) and those of his recent interpreters (e.g., Rogoff, 1990; Tharp & Gallimore, 1988; Wertsch, 1985) have also exerted an important influence in two distinct ways.

First is Vygotsky's notion of a Zone of proximal development," which he defined as

the distance between the actual developmental level as determined by independent problem solving and the level of *potential* development as determined through problem solving under adult guidance or in collaboration with more capable peers. (1978, p. 86)

The zone of proximal development lies between what a person can do independently (and, therefore, for which no instruction is needed) and what she or he can do only with someone else's assistance. The goal of instruction is to move students from dependence to independence on a wide range of skills and problem-solving abilities. The instructional conversation thus should take place in the zone of proximal development, where children construct--with the assistance of a skilled teacher--understandings of important ideas, concepts, and texts they would otherwise not understand on their own.

Second, and intimately related to the first, is Vygotsky's idea that *language is a primary vehicle for intellectual development*. Language interactions between adults and children play a key role in children's acquisition of concepts. Language is not only a means for communicating information, although it certainly is that. It is also an important vehicle for helping learners broaden and deepen their understanding of important ideas. In fact, Vygotsky suggested that language is a principal means for the development of

"schooled" or Scientific" concepts, because children acquire "new concepts and words from the general linguistic context" (Vygotsky, 1962, p. 83). As an important part of that context, therefore, instructional conversations are heavily language based and require the thoughtful use of language by a skilled teacher.

The metaphor of weaving perhaps best captures the spirit of instructional conversations (cf. Tharp & Gallimore, 1988, 1989). The weaving takes place on many levels. First, a skilled teacher weaves together the comments and contributions made by different students with the ideas and concepts the teacher wishes to explore with them. Second, the teacher weaves students' prior knowledge and experiences with new knowledge and experiences, thereby broadening the scope of their understanding while building upon understandings they already possess. Finally, during the course of the conversation, the teacher weaves together, in appropriate proportions and shadings, the 10 IC elements. While particular elements can be picked out and identified—just as threads of different color can be picked out and identified on a cloth—instruction and conversation are woven into a seamless whole: The conversation is instructional, and the instruction is conversational.

INSTRUCTIONAL CONVERSATION: AN ILLUSTRATION

To illustrate an instructional conversation, we have chosen an excerpt from a lesson conducted by a 4th-grade teacher, most of whose students were making the transition from Spanish to English reading.² These students were in a bilingual education program, but because they were in transition from Spanish to English instruction, all of their academic work was conducted in English.

The class had just read a story in an English basal reader about two friends, one of whom deviously convinces the other to buy bubble gum with the money his mother gave him for a haircut. The teacher uses the story as an opportunity to engage the children in a discussion about the various facets of friendship—that friends are not always perfect, that they can get mad at each other and have problems, and that sometimes they can resolve their difficulties through talking.

In previous discussions with the class, the teacher realized that students had fairly simplistic and exclusively positive constructions of "friends" and "friendship"—friends always get along, never fight, like to do things together, and so forth. Her theme for this lesson, therefore, was the more problematic aspects of friendship—friendship does not always constitute a perfect or idealized relationship between two people. Although she was not trying to impart a particular lesson or moral, the teacher wanted to encourage her students to consider and weigh various facets of friendship. Her goal was to help students see friendship in a more complex and differentiated light.

During the discussion, the teacher wrote on a chart students' comments and contributions about the characteristics of friends. At one point, a student said that friends must demonstrate "patience." When another student disagreed, the first student responded, "Yeap, patience because he didn't get mad when they cut the hair." This provided the teacher with a perfect opportunity to pursue the theme she wanted to explore with the students—that of more problematic aspects of friends and friendship.

TRANSCRIPT

In the following segment, these transcribing conventions are used: Phrases **in bold** show the theme of the discussion threading its way through the segment. (Single parentheses) denote words are unclear, and transcriber has written best guess. ((Double parentheses)) denote actions by participants. Pairs of brackets stacked vertically [—] denote speakers speaking simultaneously.

Tchr= Teacher

S = Unidentifiable student

Ss = Students speaking together Ca, Ml, Ce, Ja, V, Co = Individual students

Turn Speaker

- Tchr Why should Rob get **mad**,
- 00 Ca because, because **he cut his hair wrong**. awful, [crooked, and
- 01 Tchr [oh. well, do we sometimes, [get **mad** at our friends?
- 02 Ca [you have to **forgive them**, too, but.
- 03 Tchr do we sometimes **get mad** at our friends?
- 04 Ss yes
- 05 Ca yes, **course**.
- 06 Tchr when do we **get mad** at our friends, (why d'you) say "**course**" (like) **of course**, what happens when you **get mad** at your friends.
- 07 Ca they **get mad** at you,
- 08 Tchr oh, you **get mad** back at each other, ((laughter))
- 09 MI they do **something** [that you don't like or.
- 10 Ca [(they bounce the ball around)
- 11 Tchr okay. tell me a little bit more about that.
- 12 MI they do **something that you don't like** or. they'll. **not talk to you** or. **not, share** or. **not, be a good friend**,
- 13 Tchr okay, so, friendship, I'm gonna add, this time I'm gonna put it in capital letters the new ideas we got ((writes on chart)) friendship, friends **CAN get mad** at each other. right? what else did you say, they,
- 14 MI they, they **can not talk to you** or **don't share with you** or nothing,
- 15 Tchr okay, so sometimes they, **DON'T share with you**. does that **keep you from being friends**?
- 16 S [yes
- 17 S [no
- 18 Tchr okay, I heard different answers. who said "yes". it keeps, if they don't share it **keeps you from being friends**.
- 19 Ja because if you talk to them.
- 20 MI you **have problems**,
- 21 Ce you **have problems** with them and,
- 22 Tchr okay, **friends have problems**?
- 23 S ((immediately)) oh yes.
- 24 Tchr and I even heard (a word bigger than) problems, **fighting, can friends fight**?
- 25 Ss yes.
- 26 S no
- 27 Ss YES!
- 28 S yes. so.
- 29 Tchr [okay someone that said yes, tell me (how **friends can fight**)
- 30 Ca [my friend my friend one day, we were out of order and uh.
- 31 V like, umm, yesterday, I was playing with my sister, and I told her, let me see that for a second and she said "no you always get it," and we **started fighting**, and then we went with my mom and then, we said she doesn't wanna give me that she doesn't wanna give me this, and I started crying, and um, we got in problems because my mom spanked us.
- 32 Tchr okay but if that hadn't been your sister, would you **still have been a friend**?
- 33 V nope. ((laughter))
- 34 Tchr (inaudible) do you agree with Melissa?

- 35 S yes
- 36 Tchr okay Melissa, you got someone who agrees with you. So (inaudible) tell the rest of they all said, that **true friends (can) fight** you say no. tell me more about it.
- 37 MI **if true friends fight then, that's not true friends**, it just, it just doesn't work out it's not true friends.
- 38 Tchr so, **if you are true friends you would never fight**. but how **would true friends** solve problems?
- 39 S **[talking.**
- 40 MI **by talking, not fighting.**
- 41 Tchr **by talking, not fighting.** [aha,
- 42 Ce [Ms. Fuller, so many times, like friends when, when they want to **talk to you**, they **make friends again**, unless they **fight**.
- 43 Tchr okay so you're telling me that you can have a FRIEND, that can (keep it COOL) because of the **problem**, maybe even **fight** each other, real **fighting up there**, Melissa said no. you,
- 44 Co I said yes,
- 45 Tchr changed your mind,
- 46 Co I say yes, because, my friend, she always plays with us and. we were playing and. **she gets mad** because she wants to be this or she wants to be that and they don't let her, so **then I told her**, umm, you don't if you don't want to be that you don't have to. and she screamed and she said yes! I wanna be that but you can change. if you WANT to she said, I can change if I want to and you be something you are gonna have to um, do that! then okay, because we were both doing the same thing and then, she, she started, winning the others my friends (and I) **fighting with** and, she said that she **wasn't gonna be her friend again** and then she was her **friend again! was talking** to her later,
- 47 Tchr okay so, **shall I put fighting up here?** ((points to board))
- 48 S yeah
- 49 Ss yeah

This segment illustrates various IC features. There is a clear thematic focus (element #1, Table 2), that of friendship, and more specifically, some problematic aspects of friendship. The teacher clearly uses student background knowledge (#2), as she calls on students to draw on their knowledge and experiences about friendship. She elicits more speaking (#4), for example, in turns 11 and 36, when she asks students to elaborate ("tell me more") on comments they have made. The teacher also asks questions for which different answers are acceptable (#6), for example, if friends don't share, "does that keep you from being friends?" (turn 15).

Teacher and students are responsive to what others say (#7); in fact, the entire segment was in response to one student's observation that friends must be patient. There are multiple and connected student turns (#8), all of which are related to the topic at hand. Overall, the tone of the lesson is positive, yet challenging (#9), as the teacher identifies points of disagreement among the group and challenges students to justify their statements (#5; e.g., turns 18, 29).

In this segment, beginning with her opening question, "Do we sometimes get mad at our friends?", the teacher has prompted her students to consider aspects of friendship that previously had not formed a part of their discussions--that sometimes friends get mad at each other, don't share, have problems, or that they might fight. The teacher has thus led the students in discussing a more complex and differentiated view of the concept, while framing an important context for the story they have read and will discuss.

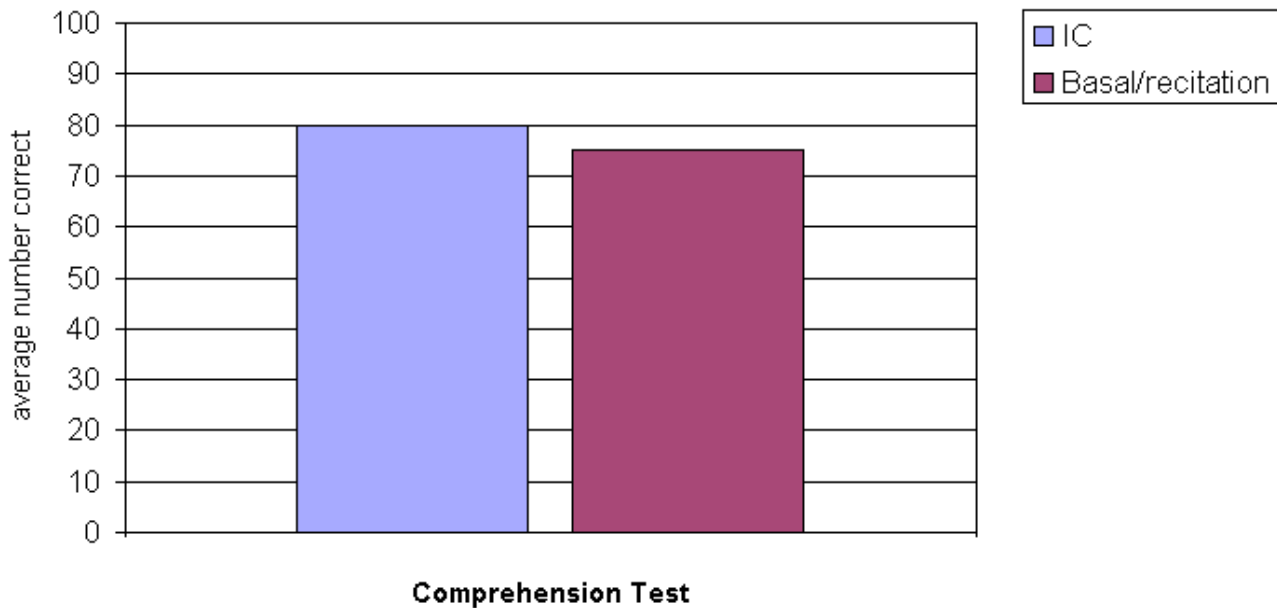
What is the effect of instructional conversations such as these on student learning? Our direct evidence is thus far limited, but encouraging.

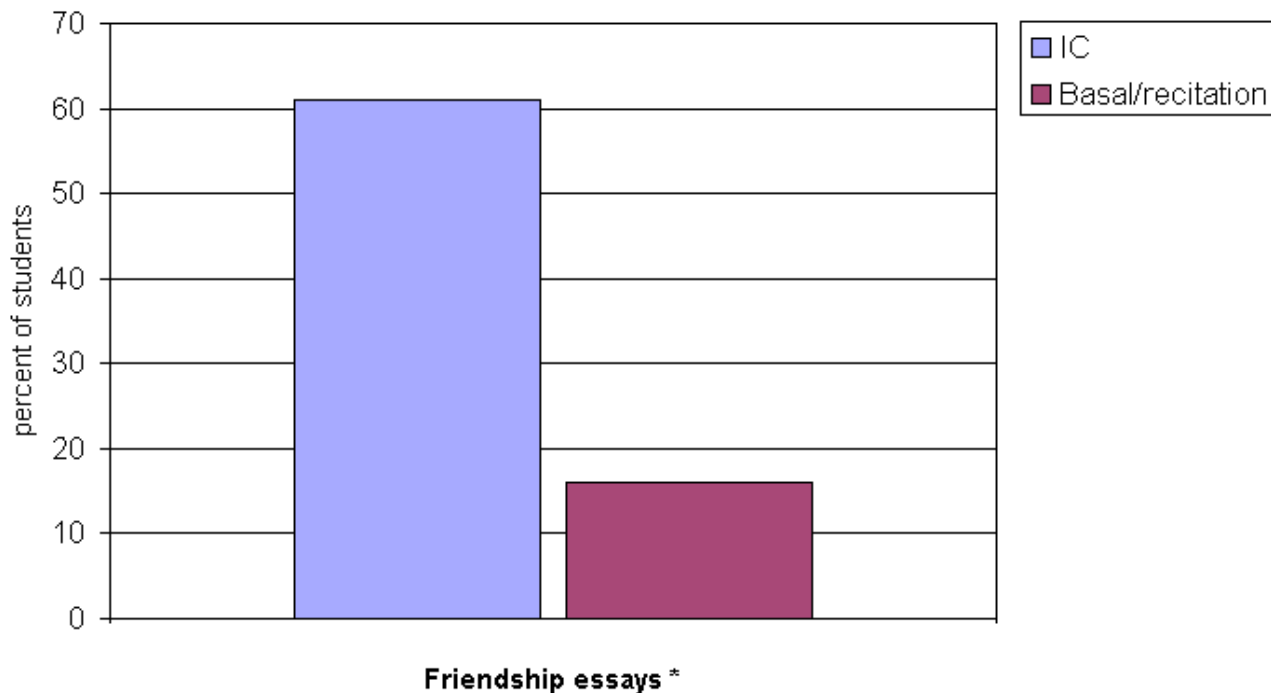
We conducted a controlled experiment where the same teacher taught two IC lessons (including the one excerpted above) and two more conventional, "basal-like" reading lessons. The basal lessons emphasized comprehension and recall of the story, and they employed more of a recitation format in which the teacher asked students questions to make certain they had understood the story. In the IC lesson, the teacher did not ignore story comprehension; instead, she checked student comprehension (and clarified any misinformation) in the context of a more thematically oriented discussion about friendship.

We were interested in seeing whether students participated in the ICs developed more sophisticated and differentiated views of friendship--as the teacher had hoped they would--without sacrificing literal comprehension of the story. Comprehension was measured by a test of 10 open-ended, short-answer questions; students' concepts about friendship were gauged by an essay about friendship they were asked to write.

As Figure 1 shows, while students in both conditions achieved equivalent levels of literal comprehension (75-80%), essays of students in the IC condition demonstrated a more complex and sophisticated conceptualization of friendship. These students' essays were more than four times as likely (62% vs. 14%) to mention, for example, that friendship is not always perfect, that friends sometimes have problems they have to work at solving, or that friendship has other difficult aspects (Saunders & Goldenberg, 1992, April). These results suggest that ICs can promote more sophisticated understandings of significant concepts, without sacrificing literal comprehension.

FIGURE 1: RESULTS OF IC VS. "BASAL RECITATION" LESSON EXPERIMENT





* Presence of language indicating a complex view of friendship: for example, friendship is not always perfect; friends sometimes have problems; friends have to work at solving problems.

LEARNING AND DOING INSTRUCTIONAL CONVERSATIONS

Given that educators--including those with whom we have worked-- have long argued for the need to incorporate discussions, or instructional conversations, into classroom practice, why are they so rarely observed? Why are these instructional events so much the exception, rather than the rule, in American classrooms? Various explanations have been offered:

- School curricula tend to emphasize lower-level skills and knowledge, thereby rendering classroom discussions largely irrelevant from the standpoint of most teachers (e.g., Gall & Gall, 1990);
- The social organization of schools and the daily worklives of teachers reinforce individualistic patterns of work and are thus inimical to carrying out these types of interactions with students (e.g., Mehan, 1991; Tharp & Gallimore, 1988);
- Many teachers tend to assume that most students--particularly low-income and minority students--cannot go beyond literal comprehension of texts, and therefore they do not even try (e.g., Schneider, et al., 1985);
- Teaching has traditionally been equated with knowledge transmission in Western society; therefore, didactic teaching is the default mode, both in and out of school (Cohen, 1988);
- Non-recitative teaching is extremely difficult to accomplish (Cazden, 1988; Klinzing & Floden, 1990), and it cannot be implemented without adequate training and support where it matters most, but is least likely to be found--at the school (Tharp & Gallimore, 1991).

No doubt there is considerable validity to all of these suggestions; if substantive and meaningful classroom discussions are ever to become an important part of students' (and teachers') school experience, then clearly, many issues must be addressed.

But whatever the reason for the rarity of ICs in U.S. classrooms, learning how to conduct them is indeed a more challenging task than at first appears. Many teachers seem to assume that they do ICs naturally, as a

matter of course, in their classrooms. Our experience in Southern California and earlier experiences in Hawaii suggest otherwise that instructional conversations are professionally and intellectually demanding teaching/ learning events that do not come easily or naturally to teachers.

Perhaps because they require balancing or juggling a number of potentially conflicting elements--for example, maintaining a clear thematic focus while being responsive to unanticipated opportunities offered by students--successful ICs seem to require considerable time and effort. Learning to manage such inherent tensions requires repeated attempts to implement ICs, coupled with videotapings, discussion, analysis of lessons, and assistance by a consultant who is knowledgeable about the theory and practice of instructional conversations.

In our ongoing work in Los Angeles, we have found it very helpful to have teachers meet weekly in a small group to discuss, plan, and evaluate IC lessons. At the beginning of the year, teachers read and discuss relevant papers on instructional conversation (e.g., Au, 1979; Tharp & Gallimore, 1989) and direct instruction (e.g., Gersten & Camine, 1986; Rosenshine, 1986). They also identify aspects of their classroom program that they feel could benefit from the use of instructional conversations, such as improving students' comprehension of texts and promoting more elaborate and complex student talk. Teachers see videotaped examples of ICs and are encouraged to try them out on their own, exploring and getting a feel for this type of instructional interaction with students. Teachers are also encouraged to focus on no more than one, two, or three IC elements at first, before attempting to incorporate all 10 into any one lesson.

When they feel ready to try teaching an IC lesson, teachers volunteer to bring in stories or books they would like to use. The entire group discusses possible approaches that can be taken. Teachers are then videotaped conducting the lessons in their classrooms, and the tapes are viewed and analyzed at the next meeting.

The rating scale contained in the Appendix appears to be very helpful in the planning and the analysis of IC lessons. The scale contains both general descriptions of each IC element and criteria for judging the extent to which each element is present in a lesson. It thus provides a framework for thinking about the components of ICs, as well as a framework for analyzing lessons. By watching videotaped lessons, then scoring and discussing them according to the scale, teachers can develop a more analytical understanding of what constitutes instructional conversations. This, then, would facilitate the process of implementing ICs in the classroom.

Clearly, all of the above is very time-consuming and labor-intensive; indeed, we have consistently found that time is an absolute requirement. Time is needed for adequate planning, which includes the analysis of texts, themes, and ideas to be discussed with students. Teachers have found that they cannot conduct satisfactory ICs if they glance at a story hurriedly and attempt to teach it "cold." One of the major lessons of our first year's work was precisely this teachers had to prepare themselves intellectually by reading the story several times, analyzing it as a piece of literature, and thinking about possible ways to approach it with a group of students. One teacher, for example, found that her lessons were much more successful when she "got into the story, . . . studied the story, and figured out" what she wanted to do with it (Goldenberg & Gallimore, 1990, p. 35). Another teacher commented:

If you read it The story], and if you think about it, and you think about the kind of ways that you can present it and what you're gonna do with it, it makes all the difference in the world (Goldenberg & Gallimore, 1990, p. 36)

This sort of analysis is so important that we have made it a regular feature of our weekly meetings, and the entire group discusses possible themes, meanings, and approaches to stories that teachers have selected for IC lessons. Invariably, teachers comment that as a result of these discussions (which themselves sometimes resemble ICs), they make new discoveries about the texts they have brought in.

Time is particularly important for selecting an appropriate theme. The theme, then, becomes the focal point of successful ICs, because it helps guide the discussion and organize the teacher's attempts to promote text comprehension. The lesson on friendship presented earlier provides a good example of how useful a theme is in guiding and giving coherence to the discussion. When a student observed that friends must be patient,

the teacher immediately realized the opportunity this comment provided to explore in more depth the various, sometimes problematic, aspects of friendship.

In the words of one teacher, a good theme provides the glue that gives coherence to an instructional conversation. Selection of a good theme and its successful elaboration in the lesson require planning and preparation in order to search out important ideas that might be brought to bear in discussing texts with students. All of this requires investments of time and intellectual energy. According to teachers, however, the time and energy requirements appear to be worthwhile. There is the sense that ICs offer unique and important opportunities, both for teachers and students, to explore important domains of learning.

THE PEACE OF INSTRUCTIONAL CONVERSATIONS IN THE SCHOOL CURRICULUM

Instructional conversations stand in contrast to many relatively "traditional" forms of teaching (e.g., lectures, recitation, direct instruction) that are based upon the assumption that the teacher's role is to help students learn what the teacher already knows and can do. ICs, on the other hand, represent an approach to teaching that is more in keeping with the contemporary shift toward a "constructivist" curriculum. According to constructivist views, students are expected to actively *construct* their own knowledge and understanding--for example, by making connections, building mental schemata, and developing new concepts from previous understandings--rather than passively receive knowledge transmitted by their teachers (see, e.g., California State Department of Education, 1987; Resnick & Klopfer, 1989). In this sense, ICs can be seen as consistent with perhaps this most important shift in mainstream educational thinking since the "Back to Basics" movement of the 1970s.

Nevertheless, even when expertly done, instructional conversations do not constitute an all-encompassing instructional method; nor, much less, do they offer educational panaceas. Rather, we suspect that ICs might be particularly suited to certain educational goals, such as helping student comprehend texts, learn complex concepts, and consider various perspectives on issues. Other forms of teaching, such as direct or explicit in; are probably more suited to different, but no less important, purposes.

Rosenshine (1986), for example, has argued that explicit teaching is highly effective for "well structured" skill and knowledge domains. Well structured domains, as the name suggests, are well defined knowledge or skill areas--for example, mathematical computations, explicit reading comprehension strategies, map reading, reading decoding, and conventions of punctuation and grammar. In these areas, the procedures for successful performance and the criteria for judging performance can be made explicit. Explicit teaching has been shown to be highly effective for these goals and objectives (see also Gage, 1978; Walberg, 1990).

Instructional conversations, in contrast, will be more suitable for domains of learning that are relatively less clearly or hierarchically organized. In these so-called "ill-structured" domains, concepts are fuzzier and, therefore, explicit steps toward successful performance cannot be followed. Examples of such areas of learning include analysis of literary or historical themes, learning and understanding complex concepts, mathematical reasoning, applying quantitative understandings, and oral or written composition (Rosenshine, 1986; Simon, 1973; Spiro & Myers, 1984).³ It is in these domains that we expect instructional conversations to be powerful instructional tools.

Rather than pitting instructional conversations against direct instruction (or any other mode of teaching with demonstrable effects), we expect professional teachers to have at their disposal a wide range of skills and knowledge suited to particular goals they have for students' learning. As educators, we are responsible for student growth and learning in many areas and it seems unlikely that any one approach or strategy will be sufficient. Improving our educational system--and more specifically, improving teaching itself--probably depends upon achieving a successful synthesis of instructional strategies that enable educators to accomplish a number of important educational goals. To this extent, instructional conversations suggest a way to expand teachers' instructional repertoires while fulfilling the visions of generations of educators.

REFERENCES

- Adler, M. (1982). *The Paideia proposal: An educational manifesto*. New York: Macmillan.
- Au, K. (1979). Using the experience-text-relationship method with minority children. *Reading Teacher*, 32, 677-679.
- Barrera, R. B. (1983). Bilingual reading in the primary grades: Some questions about questionable views and practices. In T. A. Escobedo (Ed.), *Early childhood bilingual education: A Hispanic perspective* (pp.164-184). New York: Teachers College Press.
- Brophy, J., & Good, T. (1986). Teacher behavior and student achievement. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 328-375). New York: Macmillan.
- California State Department of Education. (1987). *English-language arts model curriculum guide, kindergarten through grade eight*. Sacramento, CA: Author.
- Cazden, C. (1988). *Classroom discourse: The language of teaching and learning*. Portsmouth, NH: Heinemann.
- Cohen, D. (1988). Teaching practice: Plus ca change . . . (Issue Paper No. 88-3). East Lansing, MI: Michigan State University, National Center for Research on Teacher Education.
- Dole, J., Duffy, G., Roehler, L., & Pearson, P. (1991). Moving from the old to the new: Research on reading comprehension instruction. *Review of Educational Research*, 61, 239-264.
- Gage, N. L. (1978). *The scientific basis of the art of teaching*. New York: Teachers College Press.
- Gall, M., & Gall, J. (1990). Outcomes of classroom discussion. In W. Wilen (Ed.), *Teaching and learning through discussion* (pp.25-44). Springfield, IL.: Charles C. Thomas.
- Gersten, R., & Camine, D. (1986). Direct instruction in reading comprehension. *Educational Leadership*, 43 A), 70-78.
- Glaser, R. (1984). Education and thinking: The role of knowledge. *American Psychologist*, 39, 93-104.
- Goldenberg, C. (1984). *Roads to reading: Studies of Hispanic first graders at risk for reading failure*. Unpublished doctoral dissertation, Graduate School of Education, University of California, Los Angeles.
- Goldenberg, C., & Gallimore, R. (1990). *Meeting the language arts challenge for language-minority children: Teaching and learning in a new key*. Progress report, University of California Office of the President, Presidential Grants for School Improvement Committee, Los Angeles.
- Goldenberg, C., & Gallimore, R. (1991). Changing teaching takes more than a one-shot workshop. *Educational Leadership*, 49(3), 69-72.
- Goldenberg, C., & Patthey-Chavez, G. (1991). *Discourse processes in instructional conversations: Interactions between teacher and transition students*. Manuscript submitted for publication.
- Goodlad, J. (1984). *A place called school*. New York: McGraw-Hill.
- Hacker, C. (1980). From schema theory to classroom practice. *Language Arts*, 57, 866-871.
- Haggard, M. (1988). Developing critical thinking with the Directed ReadingThinking Activity. *The Reading Teacher*, 41, 526-533.
- Klinzing, H., & Floden, R. (1990). Learning to moderate discussions. In W. Wilen (Ed.), *Teaching and learning through discussion* (pp. 175-202). Springfield, IL: Charles C. Thomas.

- Knapp, M., & Shields, P. (1990). Reconceiving academic instruction for the children of poverty. *Phi Delta Kappan*, 71, 753-758.
- Lampert, M. (1991, April). *Representing practice: Learning and teaching about teaching and learning*. Invited address presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Mehan, H. (1979). *Learning lessons*. Cambridge, MA: Harvard University Press.
- Mehan, H. (1991). *Sociolinguistic foundations supporting the study of cultural diversity* (Research Report No. 1). Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning.
- Ramirez, J., Yuen, S., & Ramey, D. (1991). *Executive summary: Longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language minority children*. San Mateo, CA: Aguirre International.
- Resnick, L. (1984). Comprehending and learning: Implications for a cognitive theory of instruction. In H. Mandl, N. Stein, & T. Trabasso (Eds.), *Learning and comprehension of text*(pp. 431-433). Hillsdale, NJ: Erlbaum.
- Resnick, R., & Klopfer, L. (Eds.). (1989). *Toward the thinking curriculum: Current cognitive research* Alexandria,VA: Association for Supervision and Curriculum Development.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford: Oxford University Press.
- Rosenshine, B. (1986). Synthesis of research on explicit teaching. *Educational Leadership*, 43, 60-69.
- Rouse, W.H.D. (1956). *The complete texts of Great Dialogues of Plato*. New York: New American Library.
- Rueda, R., Goldenberg, C., & Gallimore, R. (1991, April). *When is an instructional conversation?* Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Saunders, W., & Goldenberg, C. (1992, April). *Effects of instructional conversations on transition students' concepts of "friendship": An experimental study*. Paper to be presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Saunders, W., Goldenberg, C., & Hamann, J. (in press). Instructional conversations beget instructional conversations. *Teaching and Teacher Education*.
- Schneider, P., Hyland, J. T., & Gallimore, R. (1985). The zone of proximal development in eighth grade social studies. *The Quarterly Newsletter of the Laboratory of Comparative Human Cognition*, 7(4J), 113-119.
- Simon, H. (1973). The structure of ill-structured problems. *Artificial intelligence*, 4, 181-201.
- Spiro, R., & Myers, A. (1984). Individual differences and underlying cognitive processes in reading. In P. Pearson (Ed.), *Handbook of reading research* (pp. 471 -501). New York: Longman.
- Stahl, S., & Clark, C. (1987). The effects of participatory expectations in classroom discussion on the learning of science vocabulary. *American Educational Research Journal*, 24, 541-555.
- Tharp, R., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning and schooling in social context*. Cambridge: Cambridge University Press.

- Tharp, R., & Gallimore, R. (1989). Rousing schools to life. *American Educator*, 13 (2), 20-25, 46-52.
- Tharp, R., & Gallimore, R. (1991). *The instructional conversation: Teaching and learning social activity* (Research Report No.2). Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning.
- Thayer, V. (1928). *The passing of the recitation*. Boston, MA: D.C. Heath.
- U.S. Department of Education. (1991). *The condition of bilingual education: A report to the Congress and the President*. Washington, DC: U.S. Government Printing Office.
- Vygotsky, L.S. (1962). *Thought and language*. Cambridge, MA: M.I.T. Press.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds. and Trans.). Cambridge, MA: Harvard University Press.
- Walberg, H. (1990). Productive teaching and instruction: Assessing the knowledge base. *Phi Delta Kappan*, 71, 470-478.
- Wertsch, J. V. (1985). *Culture, communication, and cognition: Vygotskian perspectives*. New York: Cambridge University Press.
- Wilén, W. (1990). Forms and phases of discussion. In W. Wilén (Ed.), *Teaching and learning through discussion* (pp. 3-24). Springfield, IL: Charles C. Thomas.

APPENDIX

IC Rating Scale⁴

INSTRUCTIONAL ELEMENTS

1. Thematic focus. Based on a thorough understanding of the text being used, the teacher selects a *theme or idea* to serve as a starting point to focus the discussion. The theme or idea is selected because it seems especially appropriate for the text, is worthwhile, and the teacher feels it will be meaningful and interesting for the students. The teacher has a general plan for how the theme will unfold and has decided on a strategy for "chunking" the reading of the text to permit optimal exploration of the theme.

0 _____ 1 _____ 2

No or minimal evidence
of a text-connected goal
or theme.

A great deal of evidence
of a text-connected goal
or theme

2. Activation and use of background and relevant schemata. Prior to focusing on a text, the teacher either "hooks into" or provides students with *background knowledge* pertinent to the development of story theme(s). The teacher activates *relevant schemata* in students' minds to assist their comprehension. The teacher also assesses whether students have requisite background knowledge to comprehend the text. Relevant background knowledge and pertinent schemata are then woven into the text-based discussion that follows.

0 _____ 1 _____ 2

No or minimal attempts
to assess, activate,
supply, or make use of relevant

Consistent and
systematic attempts
to assess, activate,

background knowledge.

supply, or make use
of background knowledge.

3. Direct teaching. When necessary, the teacher provides *direct teaching* of a skill or concept. This is done not with the intent of teaching decontextualized skills, but within the context of, and directly related to, understanding the larger lesson. Instead of "fishing" for a known-answer response of having students guess what the teacher is thinking, the teacher moves the discussion forward by providing information or instruction when needed. The teacher is also skilled at knowing when direct instruction is NOT needed.

0 _____ 1 _____ 2

Direct teaching is provided out of context, or or is inflexible or excessive, OR is not given when needed.

Direct teaching is provided in the context of the story, is flexible, and is given only as needed.

4. Promotion of more complex language and expression.

The teacher stretches students' zone of performance by promoting and eliciting more extended language and expression. The teacher uses a variety of *elicitation techniques*, such as questions, restatements, pauses (increased "wait time"), and invitations to expand (e.g., "tell me more about that"). Questions and other elicitation techniques are also used to model, correct, check student comprehension, and help students arrive at conclusions. The teacher is *efficient and strategic* in his or her talk, saying enough to move the discussion along, but not so much as to inhibit student talk or dominate the discussion.

0 _____ 1 _____ 2

There are few or no instances in which the teacher either elicits or models elaboration of the language used in the lesson.

The teacher frequently and systematically elicits and/or models elaboration of the language used in the lesson.

5. Promotion of bases for statements or positions. The teacher promotes students' use of text, pictures, and reasoning *to support an argument or position*. While speculative answers are acceptable, the teacher moves students toward basing answers, arguments, and positions on evidence, reasoning, and careful consideration of alternatives. The teacher also questions students regarding the basis for their statements, positions, hypotheses, and conclusions: for example, "How do you know?" "What makes you think that?" "Show us where it says ____." The teacher is also careful not to overwhelm students with questions, but use them carefully and strategically.

0 _____ 1 _____ 2

The teacher rarely or never elicits the reasoning behind, or defense of, students' statements, hypotheses, and conclusions.

The teacher frequently elicits students' reasoning and defense of statements, hypotheses, and conclusions.

CONVERSATIONAL ELEMENTS

6. Few "known-answer" questions. While the teacher might pose some factual questions to establish a basic, literal comprehension of key elements of the text, much of the discussion will center on questions and

answers that are *less "black and white,"* that is, for which there might be more than one correct answer.

0 _____ 1 _____ 2

The teacher relies mainly on literal level recall and known-answer questions, and rarely or never uses thematic, discussion-generating questions.

The teacher frequently uses thematic, discussion-generating questions and relies much less on literal level recall and known answer questions.

7. Responsiveness to student contributions. The teacher's response to student contributions to the discussion is based on a constantly updated understanding of students' own understanding. While having an initial plan and maintaining the focus and coherence of the discussion, the teacher is also *responsive to unanticipated opportunities* provided by students. Moreover, the teacher's response to student statements recasts and expands upon the students' efforts without rejecting what they have accomplished on their own. Student contribution are used to extend the discussion or to explore new-but relevant-themes. The teacher must understand the story well and listen to students carefully to decide how best to take advantage of unanticipated opportunities they provide.

0 _____ 1 _____ 2

The teacher's talk is rarely or never responsive to students' initiations, contributions, or current level of understanding.

The teacher's talk is frequently or always responsive to students' initiations, contributions, or current level of understanding.

8. Connected discourse. The discussion is characterized by multiple, interactive, connected turns, where succeeding utterances by teachers and students build upon and extend previous ones. Although the discourse is the like that found in everyday conversational settings, the discussion is guided by a thematic focus and the teacher's curricular goals, which are evident throughout all phases of the lesson.

0 _____ 1 _____ 2

There is a complete or almost complete absence of connected discourse related to the theme of the story.

The lesson is characterized by connected discourse that is continually related to the theme of the story.

9. A challenging, but non-threatening, atmosphere. The teacher successfully creates a "zone of proximal development" within the context of a non-threatening environment. That is, there is a challenging atmosphere, but it is balanced by a positive affective climate where students feel comfortable to contribute and participate and where risky, speculative answers are acceptable. Although the teacher is the "more competent other," evaluation of student answers and talk is not the guiding feature of the discourse, and the goal of the lesson is not to evaluate the correctness of answers in relation to "known-answer" questions. The teacher is more a collaborator in the discussion than an authoritative evaluator and creates an atmosphere that challenges students and allows them to negotiate the meaning of the text.

0 _____ 1 _____ 2

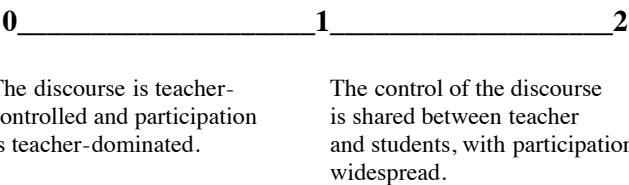
The climate of the lesson is primarily non-challenging (doesn't "push" understanding), unstimulating, or

The climate of the lesson is primarily challenging ("pushes" understanding), stimulating, and

intimidating.

non-threatening.

10. General participation, including self-selected turns. All students are encourage to participate, and the teacher uses a variety of strategies to arrange for participation by all. At the same time, the teacher does not hold exclusive right to determine who talks, and students are encouraged to volunteer or otherwise influence the selection of speaking turns as is characteristic of natural conversational settings.



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NOTES

- 1 The work reported here has been conducted with elementary-grade, mostly language-minority children during language arts instruction. For examples of similar work in junior high social studies classes, see Schneider, Hyland, Jc Gallimore, 1985. For examples--real and hypothetical--of discussions in high school social studies and English classes, see various chapters in Wilen, 1990. Classroom discussions have also been used for learning science vocabulary (Stahl car Clark' 1987) and mathematical reasoning (Lampert, 1991, April).
- 2 From Goldenberg & Patthey-Chavez, 1991. I am indebted to Genevieve Patthey Chavez for her thoughtful analysis of this and other IC segments and to Wanda Fuller, the teacher who taught the lesson.
- 3 The distinction between "well" and "ill-structured" domains no doubt lies along a continuum rather than constituting a dichotomy. As Simon (1973) has pointed out, the boundary between the two is "vague and fluid."
- 4 Thanks to Robert Rueda of the University of Southern California for developing this scale. An earlier version was reported in Rueda, Goldenberg, & Gallimore (1991, April).

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